

REMARKS

The foregoing amendment is provided to impart greater clarity to the claimed subject matter and to place the claims in condition for allowance, rather than to avoid prior art.

Applicant respectfully requests reconsideration of the above identified application. As of the Final Office Action mailed on June 30, 2006, Claims 4-5, 8, 14-18 and 28 are pending. Claims 4-5, 8, 14-15, 16-18 and 28 are rejected. Claims 31-40 are added.

Applicant respectfully requests the Examiner to reconsider the presently amended claims.

The Final Office Action mailed on June 30, 2006 rejects Claims 4-5, 8, 14-15, 16-18 and 28 under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter.

Applicant has previously amended the claims, in accordance with the Examiner's requirements, to more clearly comply with the statutory requirements of 35 USC § 101. The Final Office Action maintains that the claimed invention lacks patentable utility. Applicant respectfully disagrees.

The instant claim language when correlated with the corresponding structures and processes set forth in the specification makes it apparent to one of skill in the art that each claimed invention, respectively, has a practical application in the technical arts.

Claim 4, for example, sets forth:

4. (Previously Presented) A computer software product including one or more recordable media having executable instructions stored thereon which, when executed by a processing device, causes the processing device to perform, at least in part, a formal verification of a circuit or other finite-state system, said executable instructions causing the processing device to:

initialize a symbolic simulation relation for an assertion graph on a first symbolic lattice domain, wherein the assertion graph on the first symbolic lattice domain is configurable to express a justification property to verify by computing the symbolic simulation relation.

The Examiner holds that Applicant's specification fails to disclose a useful result because of the claim language, "formal verification of a circuit or other finite-state system," for its use of the disputed subject matter, "other finite-state system."

Transformation and reduction of an article "to a different state or thing" is the clue to the patentability of a process claim. *Cochrane v. Deener*, 94 U.S. 780, 787-788. The Federal Circuit cited *In re Prater*, 415 F.2d 1393, 162 USPQ 541, 549 (CCPA 1969) explaining: "[The Cochrane passage] has sometimes been misconstrued as a 'rule' or 'definition' requiring that all processes, to be patentable, must operate physically upon substances. Such a result misapprehends the nature of the passage." *In re Schrader*, 22 F.3d 290, 296, 30 USPQ.2d (BNA) 1457, 1460.

This notion is sometimes phrased in terms of requiring a transformation or reduction of 'subject matter.' The phrase 'subject matter' is not limited to tangible articles or objects, but includes intangible subject matter, such as data or signals, representative of or constituting physical activity or objects. *Id.* at 295, 30 USPQ.2d at 1459.

Thus Applicant respectfully submits that transformation or reduction of a symbolic simulation relation for an assertion graph to perform, at least in part, a formal verification of a circuit or other finite-state system is statutory subject matter under 35 U.S.C. § 101.

The Final Office Action rejects Claims 4-5, 8, 14-15, 16-18 and 28 under 35 U.S.C. § 112, second paragraph, as allegedly being incomplete for omitting essential structural cooperative relationships of elements (Citing MPEP §2172.01).

Applicant respectfully submits that the Examiner is in error. A rejection for omitting essential structural cooperative relationships of elements depends upon a disclosure by Applicant in the specification or of record that certain elements are essential to the invention, which Applicant has not made. Further, such a rejection, if it were proper, should be based on the first paragraph of 35 U.S.C. § 112.

The Examiner further alleges that Claims 4-5, 8, 14-15, 16-18 and 28 do not explain how a formal verification of a circuit is performed by initialization of a symbolic simulation relation for an assertion graph on a first symbolic lattice domain.

On the contrary, Claim 4, for example, sets forth that the assertion graph on the first symbolic lattice domain is configurable to express a justification property to verify by computing the symbolic simulation relation.

The Final Office Action also rejects Claims 4-5, 8, 14-15, 16-18 and 28 under 35 U.S.C. § 101 as allegedly being indefinite with regard to the claim language, "other finite state systems."

The Examiner further states that Claim 28 could be interpreted to be software only and as such the claimed system would not be statutory under 35 U.S.C. § 101.

Applicant respectfully submits that, with regard to both §§ 112 and 101, the Examiner is in error for misconstruing the instant claims.

The Federal Circuit makes it clear that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention. "The person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Phillips v. AWH Corp.*, 415 F.3d at 1313.

The specification, for example, states (p. 1, lines 14-17) that:

As hardware and software systems become more complex there is a growing need for automated formal verification methods. These methods are mathematically based techniques and languages that help detect and prevent design errors thereby avoiding losses in design effort and financial investment.

The specification also states (p. 1, line 21 through p. 2, line 2) that:

There are two well-established symbolic methods for automatically verifying such properties of circuits and finite state systems that are currently considered to be significant. The two most significant prior art methods are known as classical Symbolic Model Checking (SMC) and Symbolic Trajectory Evaluation (STE).

The Supreme Court held, in *Carnegie Steel Co. v. Cambria Iron Co.*, 185 U.S. 403, 437, that (parenthetical interpretation inserted by appellant): "The specification of the patent is not addressed to lawyers, or even to the public generally, but to the manufacturers of steel (i.e. to those of skill in the relevant art), and any description which is sufficient to apprise them in the language of the art of the definite feature of the invention, and to serve as a warning to others of what the patent claims as a monopoly, is sufficiently definite to sustain the patent. He may assume that what was already known in

the art of manufacturing steel was known to them, and, as observed by Mr. Justice Bradley, in *Webster Loom Co. v. Higgins*, 105 U.S. 580, 586, "He may begin at the point where his invention begins, and describe what he has made, that is new, and what it replaces of the old. That which is common and well known is as if it were written out in the patent and delineated in the drawings.""

Applicant respectfully submits that through the eyes of one of skill in the art and familiarity with well-established symbolic methods for automatic verification of circuits and other finite state systems, Claims 4-5, 8, 14-15, 16-18 and 28 most certainly point out and define the metes and bounds of the subject matter that is regarded as the invention and will be protected by the patent grant with a reasonable degree of clarity and particularity. One of such skill in the art and familiarity with such automated formal verification methods also would understand the utility of detecting and preventing design errors in order to avoid losses in design effort and financial investment.

Thus the specification makes it readily apparent to one of skill in the art that the claimed invention has a practical application in the technical arts. Further, Claims 4-5, 8, 14-15, 16-18 and 28 would, apprise one skilled in the art of the claims respective scope.

Therefore, Applicant respectfully submits that Claims 4-5, 8, 14-15, 16-18 and 28 are presently in condition for allowance and such action is earnestly solicited. Applicant also respectfully solicits the Examiner to grant allowance of the added Claims 31-40.

CONCLUSION

Applicant respectfully submits the present claims for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call Lawrence M. Mennemeier at (408) 765-2194.

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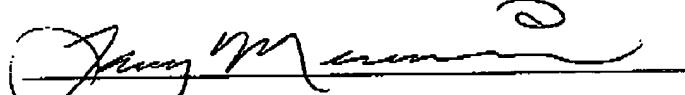
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Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

Date: 9-28-06



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